

9481.1987(02)

GROUNDWATER CLEANUP STANDARDS/ACLs IN DRAFT HSWA PERMIT
(INTERNATIONAL PAPER COMPANY)

March 10, 1987

MEMORANDUM

SUBJECT: International Paper Company, Wiggins, Mississippi

FROM: Susan Bromm, Acting Director
Permits and State Programs Division

TO: Patrick Tobin, Director
Waste Management Division

I am writing in response to your January 29, 1987 memo to Marcia Williams concerning "alternate concentration limits" (ACLs) in a draft HSWA permit for International Paper Co. (IP), Wiggins, MS. The materials you sent were reviewed by Mark Salee, Janette Hansen, and Bob Kayser of the Land Disposal Permit Assistance Team (PAT). The PAT also consulted with the corrective action work group. The comments below are based on the PAT's recommendations for approaches to corrective action for continuing releases to ground water at solid waste management units. Final Agency regulations and guidance may be different on some issues.

The draft HSWA permit contains ground-water cleanup standards (concentration limits) for 15 hazardous constituents. Seven of the concentration limits are based on an ACL-type demonstration, set at human health criteria levels. These concentration limits are consistent with currently available EPA Verified Reference Doses and proposed recommended maximum contaminant levels.

Your memo highlighted two issues of concern in the draft permit. The first issue dealt with the use of human health criteria versus taste and odor criteria as the basis for the concentration limit for pentachlorophenol. This issue has been analyzed by the Region IV Ground-water Technology and Management Section. Their conclusions were summarized in a November 5, 1986 memo from B. Stallings Howell to Doug McCurry. their rationale for the use of taste and odor thresholds is consistent with the

most recent draft ACL guidance and policy. However, their application of the rationale does not appear to be fully consistent with the ACL guidance and policy. For example, the memo states,

...ACLs based on human health criteria be adopted for phenol and pentachlorophenol at International Paper for the following reasons:

1. The probability that concentrations above the taste and odor threshold will reach a drinking water well is low at the site...

Although not explicitly addressed in the draft ACL policy and guidance, we believe that concentration limits can be set at human health criteria levels that are above taste and odor thresholds if the resource value of the ground water is not degraded. In this case, it must be shown, to a reasonable degree of certainty, that attenuation of the contaminant plume between the point of compliance and the property boundary will result in contaminant concentrations at the property boundary equal to or below the taste and odor thresholds. This type of evaluation should be performed for the IP site to ensure the protection of the ground water for future use in the area.

The second issue identified in your January 29, 1987 memo concerned the use of the minimum detection limit (MDL) to establish background as a ground-water protection standard. This is a valid approach to establishing background. However, to ensure that the permittee follows a method acceptable to EPA, the permit should contain a specified method to determine the MDLs, or specify criteria to follow when choosing a method. A method that could be used is presented in Section 1.3 of the latest version of Test Methods for Evaluating Solid Waste, SW-846. Copies of this document will be available for distribution in late March. The permit should include a reference to this SW-846 method or a more appropriate method for establishing MDLs.

During our review of the draft permit, we identified an area of concern in addition to the issues highlighted in your memo to Marcia Williams. The comments below focus on Section II.C., Corrective Action Procedures of the permit, specifically, the concentration limit for creosote, the identification of additional Appendix VIII constituents, the lack of any requirements for the treatment of the contaminated ground water,

and the termination of monitoring at a well upon reaching the concentration limit at the well.

The concentration limit for creosote in Section II.C.1. is defined by an analysis for phenanthrene and carbazole. Another definition may be more appropriate for two reasons. First, carbazole is not listed on Appendix VIII of Part 261 or on the proposed Appendix IX to Part 264 (51 FR 26632) for ground-water monitoring, and there is no standard method for analyzing carbazole in SW-846. Second, creosote was not included on the proposed Appendix IX list. Instead, a list of polynuclear aromatic hydrocarbons (PAHs) representative of the major components of creosote was included in Appendix IX. A more appropriate analysis for creosote would be to analyze for a list of PAHs. Such a list should include chrysene, fluoranthene,

naphthalene, acenaphthene, phenanthrene, fluorene, and pyrene. The permit should include concentration limits for all of these PAHs.

Section II.C.1.c. of the draft permit lists requirements to be performed by the permittee if additional Appendix VIII constituents are identified. However, the permit lacks a specific condition requiring the permittee to identify any additional Appendix VIII constituents. The draft permit only requires quarterly monitoring for the 15 hazardous constituents listed in Section II.C.1. Assuming that an initial Appendix VIII (or proposed Appendix IX) scan was performed to identify these 15 constituents, we recommend that the permit include explicit language requiring periodic (i.e., annually or less) monitoring for a comprehensive list of hazardous constituents from Appendix VIII (or proposed Appendix IX) reasonably expected to be in or derived from waste in the solid waste management units.

The permit does not address any treatment standards or methods for contaminated ground water that has been pumped from the subsurface. While ground water in itself is not a hazardous waste, ground water that contains hazardous waste must be handled as if it were hazardous waste because of the contaminants in it are subject to regulation under Subtitle C. Once the hazardous waste is removed from the water, the water is no longer subject to Subtitle C regulation (see memo from Marcia Williams to you, dated November 13, 1986). The permit should, at a minimum, contain a schedule of compliance for the submittal of plans for the handling and/or treatment of the contaminated ground water. (The Agency's authority to stipulate treatment standards as part of a corrective action permit condition comes from 264.101 and

Sec. 3005(c)(3) of HSWA). As was stated in the permit, the permittee should comply with all other State and Federal laws regarding treatment and discharge of the water. You should also be aware that "source control" can be an important aspect of RCRA corrective action. You may also want to consider directing the permittee to study source control options

Part II.C.5. of the permit states that: "Upon reaching the concentration limits at any monitoring well further monitoring of that well may be terminated...." This condition may not be fully protective of human health and the environment, as contaminants in the ground water do not necessarily occur in one continuous plume. There may actually be several plumes of varying compositions. A ground-water sample which indicates allowable concentrations of contaminants may just represent an area between two plumes. I suggest that the permit require some type of less frequent, short-term verification monitoring (i.e., three consecutive years as discussed §264.100(f)) before monitoring and/or corrective action is terminated.

If you or your staff have any questions or concerns about any of the comments or recommendations presented in this memo, feel free to call Mark Salee of my staff at (FTS) 382-4692.

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